

< TEST

Biology Chemistry Physics English

- 1) **Excretory homeostasis, deals with:**
A) Removal of water C) Removal of waste
B) Conservation of water D) Conservation of wastes
- ☐ A ☐ B ☐ C ☐ D
- 2) **The nitrogenous wastes collected from the body are received by kidneys through:**
A) Artery C) Arteriole
B) Vein D) Venule
- ☐ A ☐ B ☐ C ☐ D
- 3) **Kidney is basically a/an:**
A) Osmoregulatory organ
B) Excretory organ
C) Thermoregulatory organ
D) Glucoregulatory organ
- ☐ A ☐ B ☐ C ☐ D
- 4) **Glomerulus may better be described as a:**
A) Knot of Capillaries C) Ball of capillaries
B) Network of capillaries D) Loop of capillaries
- ☐ A ☐ B ☐ C ☐ D
- 5) **Human urinates through a tube called:**
A) Ureter C) Urethra
B) Vagina D) Nephron
- ☐ A ☐ B ☐ C ☐ D
- 6) **The animals having advantage of being diversified and distributed in variety of regions on earth are:**
A) Ectothermic C) Endothermic
B) Heterothermic D) Poikilothermic
- ☐ A ☐ B ☐ C ☐ D

7) A loop of blood vessels which is part of juxtamedullary nephrons is called:

- A) Vasa recta
- B) Loop of Henle
- C) Distal tubule
- D) Proximal tubule

☐ A ☐ B ☐ C ☐ D

8) In each nephron inner end forms a cup-shaped swelling called:

- A) Bowman's capsule
- B) Renal hilus
- C) Renal pyramid
- D) Renal capsule

☐ A ☐ B ☐ C ☐ D

9) All the useful constituents of the glomerular filtrate are returned to the blood by a process called:

- A) Active transport
- B) Reabsorption
- C) Secretion
- D) Filtration

☐ A ☐ B ☐ C ☐ D

10) Normally, glomerular filtrate does not carry:

- A) Urea
- B) Globulins
- C) Salts
- D) Uric acid

☐ A ☐ B ☐ C ☐ D

11) The nephrons associated with conservation of water are:

- A) Cortical
- B) Juxtamedullary
- C) Proximal
- D) Distal

☐ A ☐ B ☐ C ☐ D

12) Tubular part of juxtamedullary nephrons, loops deep into:

- A) Outer cortex
- B) Inner cortex
- C) Inner medulla
- D) Outer medulla

☐ A ☐ B ☐ C ☐ D

13) All the useful constituents of glomerular filtrate are normally reabsorbed in:

- A) Glomerulus
- B) Proximal tubule
- C) Bowman's capsule
- D) Distal tubule

☐ A ☐ B ☐ C ☐ D

14) The processes mainly involved in maintaining the pH of glomerular filtrate is called:

- A) Pressure filtration
- B) Reabsorption
- C) Tubular secretion
- D) Concentration of urine

☐ A ☐ B ☐ C ☐ D

15) The collecting tubules open into:

- A) Renal hilus
- B) Renal pelvis
- C) Renal medulla
- D) Renal cortex

☐ A ☐ B ☐ C ☐ D

16) Outflow of water is not allowed from:

- A) Ascending limb of loop of Henle
- B) Descending limb of loop of Henle
- C) Proximal convoluted tubule
- D) Collecting tubule

☐ A ☐ B ☐ C ☐ D

17) Conservation of sodium is promoted by:

- A) ADH
- B) Aldosterone
- C) Oxytocin
- D) Insulin

☐ A ☐ B ☐ C ☐ D

18) ADH is associated with:

- A) Conservation of water
- B) Production of water
- C) Lysis of water
- D) Removal of water

☐ A ☐ B ☐ C ☐ D

19) Urea leaves the human blood in the form of:

- A) Urine
- B) Tubular secretion
- C) Filtrate
- D) Sweat

☐ A ☐ B ☐ C ☐ D

20) The production of concentrated urine indicates the:

- A) Deficiency of water
- B) Availability of water
- C) Inactivity of body
- D) Inactivity of sweat glands

☐ A ☐ B ☐ C ☐ D

21) Stability in internal environment of organisms is attained through:

- A) Excretion
- B) Osmoregulation
- C) Thermoregulation
- D) Homeostasis

☐ A ☐ B ☐ C ☐ D

22) The stimulus for the secretion of ADH is:

- A) Hypertonic condition in the body
- B) Hypotonic condition in the body
- C) Isotonic condition in the body
- D) Hypoosmotic condition in the body

☐ A ☐ B ☐ C ☐ D

23) _____ circulate the blood through

Bowman's capsule:

- A) Peritubular capillaries
- B) Afferent arterioles
- C) Glomeruli
- D) Efferent arterioles

☐ A ☐ B ☐ C ☐ D

24) Reabsorption of glomerular filtrate starts from:

- A) Loop of Henle
- B) Distal convoluted tubule
- C) Proximal convoluted tubule
- D) Urine collecting duct

☐ A ☐ B ☐ C ☐ D

25) Main factor for the production of hypertonic urine is gradually increasing osmotic concentration from:

- A) Inner medulla to cortex

- B) Cortex to inner medulla
- C) Renal pelvis to ureters
- D) Ureters to urinary bladder

☐ A ☐ B ☐ C ☐ D

26) _____ and _____ are the primary structures for eliminating waste products:

- A) Liver, spleen
- B) Spleen, kidneys
- C) Liver, kidneys
- D) Kidneys, bladder

☐ A ☐ B ☐ C ☐ D

27) Skin has been adapted as an organ of thermoregulation in:

- A) Mammals
- B) Reptiles
- C) Vertebrates
- D) Humans

☐ A ☐ B ☐ C ☐ D

28) When we suffer from hypothermia:

- A) Blood supply to skin is enhanced
- B) Blood supply from skin is cut down
- C) Sweat glands are activated
- D) Skin blood vessels dilate

☐ A ☐ B ☐ C ☐ D

29) In human body cooling and heating systems are activated by:

- A) Forebrain
- B) Hindbrain
- C) Midbrain
- D) Spinal cord

☐ A ☐ B ☐ C ☐ D

30) Fever or high temperature stimulates:

- A) The vulnerabilities against the pathogens
- B) The disease causing capabilities of the pathogens
- C) The protective mechanisms against the pathogens
- D) The resistance mechanisms of the pathogens

☐ A ☐ B ☐ C ☐ D

31) In living control system response is shown by:

- A) Receptors
- B) Effectors
- C) Sensor
- D) Control center

☐ A ☐ B ☐ C ☐ D

32) Which one of the following is not a part of nephron?

- A) Urethra
- B) Bowman's capsule
- C) Loop of Henle
- D) Proximal tubule

☐ A ☐ B ☐ C ☐ D

33) Reabsorption of glomerulus filtrate in human kidney can save _____ % of the water of the filtrate:

- A) Less than 99.5
- B) More than 99.5
- C) Less than 98
- D) More than 98.5

☐ A ☐ B ☐ C ☐ D

34) A self-regulation mechanism for the maintenance of internal conditions in a cell or an organism is called:

- A) Homeostasis
- B) Metabolism
- C) Coordination
- D) Homeothermy

☐ A ☐ B ☐ C ☐ D

35) Detection of change and signaling for effector's response to control system is a:

- A) Feedback mechanism
- B) Positive feedback
- C) Negative feedback
- D) Feedback inhibition

☐ A ☐ B ☐ C ☐ D

36) A homeostatic control system just like a physical control system consists of:

- A) Three components
- B) Two components
- C) Four components
- D) Five components

☐ A ☐ B ☐ C ☐ D

37) In bacterial and viral infections mainly:

- A) Leukocytes decrease in number
- B) Leukocytes increase in number
- C) Erythrocytes increase in number
- D) Erythrocytes decrease in number

☐ A ☐ B ☐ C ☐ D

38) Gland present on the top of kidneys is:

- A) Adenoid
- B) Adrenal
- C) Thyroid
- D) Parathyroid

☐ A ☐ B ☐ C ☐ D

39) The maintenance of internal temperature within a tolerable range is termed as:

- A) Homeothermy
- B) Thermoregulation
- C) Poikilothermy
- D) Heterothermy

☐ A ☐ B ☐ C ☐ D

40) Which one of the following surrounds the kidney?

- A) Renal capsule
- B) Renal corpuscle
- C) Renal cortex
- D) Renal medulla

☐ A ☐ B ☐ C ☐ D

41) The ureters of both kidneys pour urine into:

- A) Urethra
- B) Urinary bladder
- C) Hilus
- D) Pelvis

☐ A ☐ B ☐ C ☐ D

42) Hypothermia may induce following physiological changes, EXCEPT:

- A) Perspiration
- B) Shivering
- C) Respiration
- D) Exothermy

☐ A ☐ B ☐ C ☐ D

43) Which one of the following have enabled the animals and plants to distribute themselves in wide range of habitats?

- A) Thermoregulation
- B) Osmoregulation
- C) Excretion
- D) Reproduction

☐ A ☐ B ☐ C ☐ D

44) The Bowman's capsules of nephrons are located in:

- A) Renal medulla C) Renal cortex
B) Renal hilus D) Renal pelvis

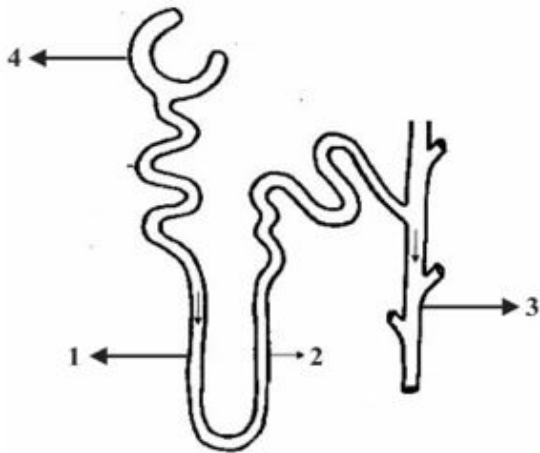
☐ A ☐ B ☐ C ☐ D

45) The most toxic nitrogenous waste is:

- A) Ammonia C) Uric acid
B) Urea D) Bilirubin

☐ A ☐ B ☐ C ☐ D

46) The diagram shows a nephron:



Which labelled region is mainly responsible for active uptake of sodium?

- A) 1 C) 3
B) 2 D) 4

☐ A ☐ B ☐ C ☐ D

47) Homeostatic thermostat is present in which part of human brain?

- A) Thalamus C) Hypothalamus
B) Pons D) Cerebellum

☐ A ☐ B ☐ C ☐ D

48) Inverse effectors response of homeostatic feedback mechanism is actually:

- A) A harmful negative feedback
B) A useful negative feedback
C) A harmful positive feedback
D) A useful positive feedback

☐ A ☐ B ☐ C ☐ D

49) The part of nephron where pressure filtration occurs is called:

- A) Renal corpuscle C) Glomerular capsule
B) Kidney capsule D) Renal capsule

☐ A ☐ B ☐ C ☐ D

50) Human maintain their high body temperature within a narrow range of about:

- A) 36-38 °C C) 35-37 °C
B) 36-37 °C D) 35-38 °C

☐ A ☐ B ☐ C ☐ D

< TEST

Biology **Chemistry** Physics English

51) The type of structural isomerism which arises due to shifting of proton from one atom to the other atom in the same molecule is called:

- A) Metamerism
B) Mesomerism
C) Stereoisomerism
D) Tautomerism

☐ A ☐ B ☐ C ☐ D

52) The main reason of such a large number of organic compounds is:

- A) Catenation
B) Complexity in organic compound
C) Isomerism
D) Homologous series

☐ A ☐ B ☐ C ☐ D

53) The type of isomerism which arises due to the difference in the nature of carbon chain is called:

- A) Chain isomerism
B) Metamerism
C) Functional group isomerism
D) Tautomerism

☐ A ☐ B ☐ C ☐ D

54) Which of the following is formula of cycloalkanes?

- A) C_nH_{2n}
B) C_nH_{2n-2}
C) C_nH_{2n+2}
D) C_nH_{2n+1}

☐ A ☐ B ☐ C ☐ D

55) Which one of the following is incorrect prefix for functional group in poly-functional organic compounds?

Opt.	Functional group	Prefix
A)	-OH	Hydroxyl-
B)	-CN	Cyano-
C)	-SH	Mercapto-
D)	-NH ₂	Amino-

☐ A ☐ B ☐ C ☐ D

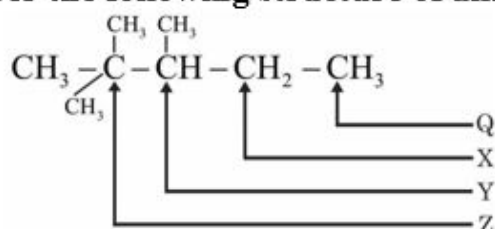
56) Ethoxy ethane and methoxy propane show which of the following types of isomerism:

- A) Position isomerism

- B) Metamerism
C) Tautomerism
D) Cis-trans isomerism

☐ A ☐ B ☐ C ☐ D

57) Consider the following structure of alkane:



Which of the following letters denotes tertiary carbon?

- A) Q C) Y
B) X D) Z

☐ A ☐ B ☐ C ☐ D

58) Which of the following compounds exhibit geometrical isomerism?

- A) 1-Pentene C) 2-Pentene
B) 2-Methyl-2-pentene D) 2-Methyl-2-butene

☐ A ☐ B ☐ C ☐ D

59) Consider the following statements for a functional group.

- I. It serves as a basis for nomenclature of organic compounds
II. It serves to classify organic compounds into different classes
III. It is a site of chemical reaction

Which of the above statement is/are correct for a functional group?

- A) I only C) II only
B) II and III D) I, II and III

☐ A ☐ B ☐ C ☐ D

60) Consider the following statements about synthesis of organic compounds?

- I This concept was put forward by a German chemist, Friedrich Wohler in 1828.
II According to the modern concept, organic compounds can be obtained not only by living organisms.
III They can also be synthesized in the laboratory.
IV With the help of this experiment he disproved the vital force theory concept.

Which of the above statements is/are correct?

- A) I only C) II and III only
B) II only D) I, II, III and IV

☐ A ☐ B ☐ C ☐ D

61) Which of the following is/are main types of isomerism?

- A) Structural isomerism only C) Both A and B
B) Stereoisomerism only D) Neither A nor B

☐ A ☐ B ☐ C ☐ D

62) All of the following are organic compounds EXCEPT?

- A) Ethanal C) Acetate acid
B) Ethanol D) Sodium carbonate

☐ A ☐ B ☐ C ☐ D

The types of isomerism which arises due to the

63) The types of isomerism which arises due to the unequal distribution of carbon atom on either side of the functional group is called:

- A) Metamerism C) Chain isomerism
B) Tautomerism D) Position isomerism

☐ A ☐ B ☐ C ☐ D

64) Which of the following is/are reason to classify organic compounds?

- A) It is practically not possible to study each individual compound from the millions of organic compounds
B) To facilitate their study, organic compounds are classified into various groups and sub-groups
C) Both A and B
D) Neither A nor B

☐ A ☐ B ☐ C ☐ D

65) All of the following are aliphatic organic compounds having different functional group EXCEPT:

- A) Ethanol C) Nitromethane
B) Ethanal D) Thiophene

☐ A ☐ B ☐ C ☐ D

66) Which of the following is the structure of benzoyl group?

- A) $C_6H_5 - CO -$ C) $C_6H_5 - \overset{\overset{|}{\text{CH}}}{-}$
B) $C_6H_5 - CH_2 -$ D) $C_6H_5 -$

☐ A ☐ B ☐ C ☐ D

67) The correct order of priority in poly-functional group organic compounds is:

- A) Carboxylic acids, aldehydes, amines, alcohols
B) Aldehydes, amines, carboxylic acids, alcohols
C) Alcohols, aldehydes, amines, carboxylic acids
D) Carboxylic acids, aldehydes, alcohols, amines

☐ A ☐ B ☐ C ☐ D

68) The carbocyclic compounds which contain at least one benzene ring are called:

- A) Aromatic compounds
B) Alicyclic compounds
C) Heterocyclic compounds
D) Aliphatic compounds

☐ A ☐ B ☐ C ☐ D

69) All of the following show functional group isomerism EXCEPT:

- A) Alcohol and ether
B) Aldehyde and Ketone
C) Ester and acid anhydride
D) Carboxylic acid and ester

☐ A ☐ B ☐ C ☐ D

70) o-Nitrotoluene and p-nitrotoluene are the examples of:

- A) Position isomerism C) Optical isomerism
B) Cis-trans isomerism D) Chain isomerism

☐ A ☐ B ☐ C ☐ D

71) The number of classes of organic compounds is:

- A) 4
B) 5
C) 3
D) 6

☐ A ☐ B ☐ C ☐ D

72) The major source of organic compounds is/are:

- A) Coal
B) Petroleum and natural gas
C) Minerals
D) Both A and B

☐ A ☐ B ☐ C ☐ D

73) Which of the following statements is incorrect for organic compounds and inorganic compounds?

Opt.	Organic compounds	Inorganic compounds
A)	They have low melting points	They have high melting points
B)	They are flammable	They are non-flammable
C)	Their chemical reactions are usually slow	Their chemical reactions are rapid
D)	They show polymorphism and isomerism	They show isomerism

☐ A ☐ B ☐ C ☐ D

74) Which of the following is an alicyclic compound?

- A) Naphthalene
B) Cyclohexene
C) Neopentane
D) Pyridine

☐ A ☐ B ☐ C ☐ D

75) Which formula represents a compound which has cis-trans isomerism?

- A) C_2H_6O
B) $C_2H_2O_4$
C) CH_3-CH_2Cl
D) $C_2H_2Cl_2$

☐ A ☐ B ☐ C ☐ D

76) Organic compound can be classified:

- A) On the basis of arrangement carbon atoms in molecule
B) On the basis of functional group
C) Both A and B
D) Neither A nor B

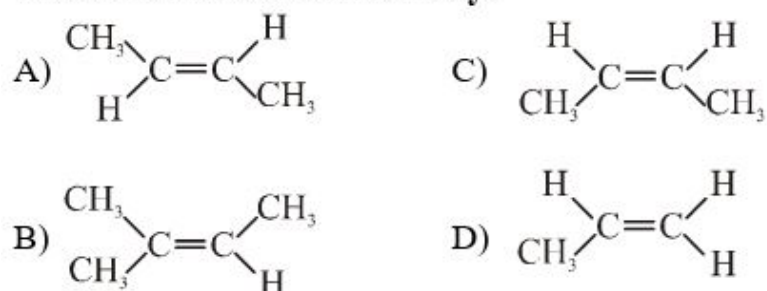
☐ A ☐ B ☐ C ☐ D

77) Which of the following statements does not match correctly?

- A) Formyl group $-CHO$
B) Imino group $\text{>C} = NH$
C) Cyano group $-C \equiv N$
D) Nitro group $-N = O$

☐ A ☐ B ☐ C ☐ D

78) The cis-isomerism is shown by:



☐ A ☐ B ☐ C ☐ D

79) Such compounds which possess the same structural formula, but differ with respect to the positions of the identical groups in space are called:

- A) Geometric isomerism
B) Functional group isomerism
C) Tautomerism
D) Metamerism

☐ A ☐ B ☐ C ☐ D

80) In geometric isomerism, cis-isomer does not show which of the following properties:

- A) It is polar molecule
B) It has high boiling point
C) Its dipole moment cannot be zero
D) It has high melting point

☐ A ☐ B ☐ C ☐ D

81) Which of the following is not heterocyclic compound?

- A) Pyrrole C) Aniline
B) Furan D) Pyridine

☐ A ☐ B ☐ C ☐ D

82) Mark the incorrect statement for cis-trans isomerism?

- A) Having carbon carbon double bond $\left\{ \begin{array}{c} \diagup \quad \diagdown \\ \text{C}=\text{C} \\ \diagdown \quad \diagup \end{array} \right\}$
B) Different groups are attached with carbon carbon containing double bond
C) Double bond involves free rotation
D) In cis form similar groups lie on the same side of double bond

☐ A ☐ B ☐ C ☐ D

83) Which of the following does not show geometric isomerism?

- A) $\text{H}_3\text{C}-\text{CH}=\text{CBr}_2$
B) $\text{H}_3\text{C}-\text{CH}=\text{CH}-\text{CH}_3$
C) $\text{CH}_3-\text{CBr}=\text{CBr}-\text{CH}_3$
D) $\text{CH}_3-\text{CH}=\text{CH}-\text{CH}_2-\text{CH}_3$

☐ A ☐ B ☐ C ☐ D

84) Which of the following molecules shows geometric isomerism?

- A) 1-Hexene C) 3-Hexene
B) 1-Pentene D) 1-Butene

☐ A ☐ B ☐ C ☐ D

85) Which of the following cannot show metamerism?

- A) Ethoxyethane C) 3-pentanone

B) Butanone

D) Methyl propanoate

☐ A

☐ B

☐ C

☐ D

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Biology Chemistry **Physics** English

- 86) Three particles have charges $+10\text{ }\mu\text{C}$ each, and they are fixed at the corners of an equilateral triangle of side 0.5 m . The force on each of the particles has magnitude:

A) 6.2 N C) 2.3 N
B) 11.5 N D) None of these

☐ A ☐ B ☐ C ☐ D

- 87) The coulomb force between a positron and a proton placed at a distance of 3.2 cm is:

A) $5.2 \times 10^{-25}\text{ N}$, repulsive C) $1.5 \times 10^{-25}\text{ N}$, repulsive
B) $9.1 \times 10^{-25}\text{ N}$, attractive D) $2.2 \times 10^{-25}\text{ N}$, repulsive

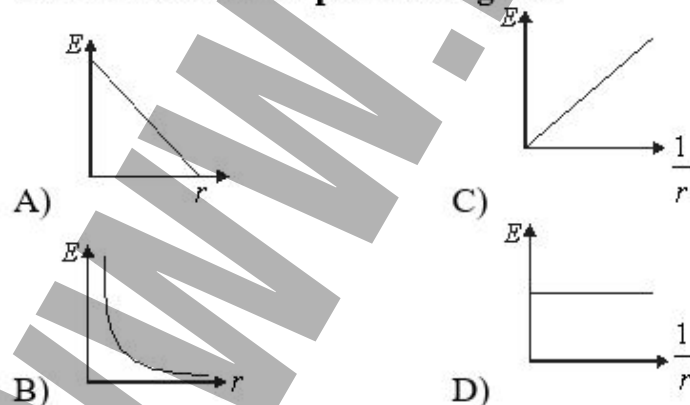
☐ A ☐ B ☐ C ☐ D

- 88) The electric field produced by a point charge $q = -4 \times 10^{-6}\text{ C}$ (placed at origin) at a point 3 m from origin on the y-axis is:

A) $(-4 \times 10^3 \hat{j})\text{ N C}^{-1}$ C) $(-6 \times 10^3 \hat{j})\text{ N C}^{-1}$
B) $(-8 \times 10^3 \hat{i})\text{ N C}^{-1}$ D) $(-9 \times 10^3 \hat{k})\text{ N C}^{-1}$

☐ A ☐ B ☐ C ☐ D

- 89) The electric field produced by a point charge varies with distance from point charge as:



☐ A ☐ B ☐ C ☐ D

- 90) Two positive point charges $32\ \mu\text{C}$ and $8\ \mu\text{C}$ are separated by a distance of $6\ \text{m}$. The zero-field spot will be at:

A) Between the charges and at $2\ \text{m}$ from smaller charge
B) Between the charges and at $2\ \text{m}$ from larger charge
C) Between the charges and at $4\ \text{m}$ from the larger charge
D) Both A and C

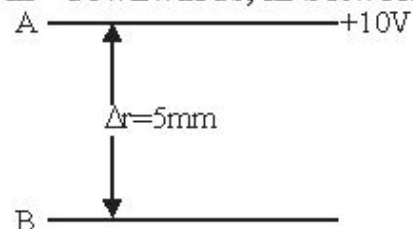
☐ A ☐ B ☐ C ☐ D

- 91) The potential gradient between the two charged plates having separation of $0.25\ \text{cm}$ and potential difference of $24\ \text{volts}$ is:

A) $9600\ \text{N C}^{-1}$ C) $4800\ \text{N C}^{-1}$
B) $7200\ \text{N C}^{-1}$ D) $2400\ \text{N C}^{-1}$

☐ A ☐ B ☐ C ☐ D

- 92) What potential should be applied to the lower plate in the diagram shown to create an electric field of $20,000\ \text{V m}^{-1}$ downwards, in between the plates?



A) $-90\ \text{V}$ C) $-45\ \text{V}$
B) $+90\ \text{V}$ D) $+45\ \text{V}$

☐ A ☐ B ☐ C ☐ D

- 93) Compare the electrons accelerated through a certain potential difference and protons accelerated through the same potential difference. If initial velocities are negligible, then the emergent:

A) Electrons have smaller K.E
B) Protons have larger velocity
C) Electrons have larger momentum
D) Protons have larger momentum

☐ A ☐ B ☐ C ☐ D

- 94) Two charges $2\ \mu\text{C}$ and $10\ \mu\text{C}$ separated by $20\ \text{cm}$, the ratio of electrical forces acting on them will be:

A) $1 : 2$ C) $1 : 5$
B) $1 : 1$ D) $5 : 1$

☐ A ☐ B ☐ C ☐ D

- 95) The electric field strength and electric field lines between two oppositely charged parallel plates is/are:

A) Uniform, Parallel and evenly spaced
B) Non-Uniform, Parallel and evenly spaced
C) Zero, No lines exist
D) Non-Uniform, Curved

☐ A ☐ B ☐ C ☐ D

- 96) The electrostatic force between two point charges is independent of one of the following quantities:

A) Magnitude on charges
B) Temperature of the charges
C) Distance between charges
D) Medium between charges

☐ A ☐ B ☐ C ☐ D

- 97) The energy of an electron which accelerates through a potential difference of $1000\ \text{V}$ is:

A) $1.6 \times 10^{-22}\ \text{J}$ C) $1.6 \times 10^{-19}\ \text{J}$

B) $1.6 \times 10^{-20} \text{ J}$

D) $1.6 \times 10^{-16} \text{ J}$

- ☐ A ☐ B ☐ C ☐ D

98) Relative permittivity for air is:

- A) 1.06 C) 1.006
B) 1.0006 D) 1.6

- ☐ A ☐ B ☐ C ☐ D

99) Electric charges A and B are attracted to each other. Electric charges B and C repel each other. If A and C are held close together they will:

- A) Attract each other
B) Have no effect
C) Repel each other
D) Insufficient information given

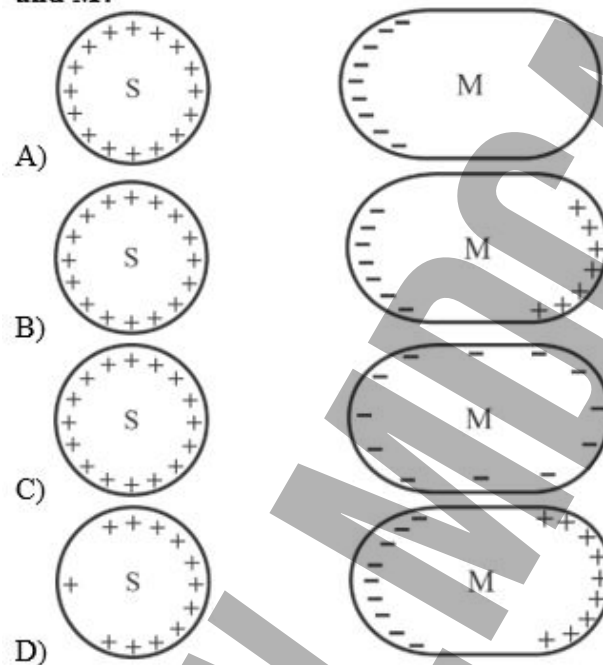
- ☐ A ☐ B ☐ C ☐ D

100) The electric field intensity due to source charge q at distance r from it in the presence of air is:

- A) $\vec{E} = \frac{1}{4\pi\epsilon_0} \frac{q}{r} \hat{r}$ C) $\vec{E} = \frac{1}{4\pi\epsilon_0} \frac{q}{r^2} \hat{r}$
B) $\vec{E} = \frac{1}{4\pi\epsilon_0} \frac{q}{r^2} \hat{r}$ D) $|\vec{E}| = \frac{1}{4\pi\epsilon_0} \frac{q}{r^2} \hat{r}$

- ☐ A ☐ B ☐ C ☐ D

101) An uncharged metal object M is insulated from its surroundings. A positively charged metal sphere S is then brought near to M. Which diagram best illustrates the resultant distributions of charge on S and M?



- ☐ A ☐ B ☐ C ☐ D

102) The correct expression for the Coulomb's force between two charges placed in vacuum is:

- A) $\vec{F} = \frac{1}{4\pi\epsilon_0} \times \frac{q_1 q_2}{r^2} \vec{r}$ C) $\vec{F} = \frac{1}{4\pi\epsilon_0} \times \frac{q_1 q_2}{r^3} \vec{r}$
B) $\vec{F} = \frac{1}{4\pi\epsilon_0} \times \frac{q_1 q_2}{r^2} \hat{r}$ D) $\vec{F} = \frac{1}{4\pi\epsilon_0} \times \frac{q_1 q_2}{r^2} \hat{r}$

- ☐ A ☐ B ☐ C ☐ D

103) If the distance between two equal point charges is doubled and magnitude of either charge is also doubled, what would happen to the force between them?

- A) Force is doubled
B) Force is quadrupled
C) Force is halved
D) Force remains same

☐ A ☐ B ☐ C ☐ D

104) If a charge of $5 \mu\text{C}$ experiences a force of 10^{-7} N at a point then electric intensity at that point:

- A) $5 \times 10^1 \text{ N C}^{-1}$
B) $8 \times 10^2 \text{ N C}^{-1}$
C) $1 \times 10^{-2} \text{ N C}^{-1}$
D) $2 \times 10^{-2} \text{ N C}^{-1}$

☐ A ☐ B ☐ C ☐ D

105) The zero-field spot for two equal and opposite charges lies:

- A) At mid-point of charges
B) Between the charges but closer to smaller charge
C) Between the charges but closer to larger charge
D) None of these

☐ A ☐ B ☐ C ☐ D

106) A 10 C charge experiences a force of 4000 N when moved between two points separated by a distance of 8 cm in a uniform electric field. The potential difference between the two points is:

- A) 8 V
B) 16 V
C) 32 V
D) 24 V

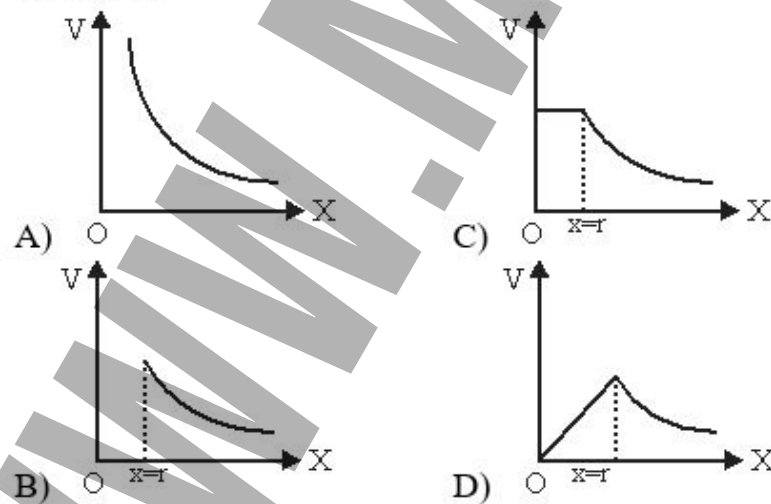
☐ A ☐ B ☐ C ☐ D

107) The potential difference between two points is two volts. The work done in moving one electron from one point to other point is:

- A) One kWh
B) One electron volt
C) Two electron volt
D) One joule

☐ A ☐ B ☐ C ☐ D

108) For a uniformly charged spherical shell of radius " r ", which one of the following graphs shows the variation of the potential with distance " x " from the centre of the shell?



☐ A ☐ B ☐ C ☐ D

109) A charge of 5 C is given a displacement of 0.5 m and work done in the process is 10 J . The difference of potential between two points is:

- A) 2 V
B) 1 V
C) 0.25 V
D) 4 V

☐ A ☐ B ☐ C ☐ D

110) The electrostatic force between charges is 42 N . If we

place a dielectric of $\epsilon_r = 2.1$ between the charges, then the force become equal to:

- A) 42 N
B) 20 N
C) 88.2 N
D) 2 N

☐ A ☐ B ☐ C ☐ D

111) The electric potential at a point of distance 1 m from $2 \mu\text{C}$ charge is:

- A) $1.8 \times 10^6 \text{ V}$
B) $1.8 \times 10^4 \text{ V}$
C) $1.8 \times 10^6 \text{ N/C}$
D) $1.8 \times 10^5 \text{ N/C}$

☐ A ☐ B ☐ C ☐ D

112) The concept of electric field was introduced by:

- A) Coulomb
B) Faraday
C) Gauss
D) Ampere

☐ A ☐ B ☐ C ☐ D

113) The unit of surface charge density is:

- A) C m
B) C m^{-1}
C) C m^2
D) C m^{-2}

☐ A ☐ B ☐ C ☐ D

114) The electric field intensity due to infinite sheet of charge is:

- A) $\frac{\sigma}{\epsilon_0}$
B) $\frac{\sigma}{2\epsilon_0}$
C) $\frac{2\sigma}{\epsilon_0}$
D) $\frac{2\epsilon_0}{\sigma}$

☐ A ☐ B ☐ C ☐ D

115) If the product of two stationary charges is negative, then the coulomb's force is:

- A) Attractive and directed away from source charge
B) Attractive and directed towards the source charge
C) Repulsive and directed towards the source charge
D) Repulsive and directed away from source charge

☐ A ☐ B ☐ C ☐ D

PREVIOUS

FINISH TEST

NEXT

< TEST

Biology Chemistry Physics **English**

- 116)** Directions: Fill in the blank with appropriate option:

Even though we now have voice mail, answering the phone and writing down messages _____ up a lot of my time.

- A) To take C) Taken
B) Takes D) Take

☐ A ☐ B ☐ C ☐ D

- 117)** Every hill and every mountain _____ covered with the clouds of disappointment, persecution and pessimism; soon, it shall be made low and the glory of the Lord shall be revealed.

- A) Are C) Is
B) Be D) were

☐ A ☐ B ☐ C ☐ D

- 118)** While sailing in the same boat, the king including all the passengers _____ displeased with the slave who in fear of being drowned began to cry and tremble and created inconvenience for the others.

- A) Were C) Was
B) Been D) be

☐ A ☐ B ☐ C ☐ D

- 119)** "Chips," she said, "they're wrong, you know, and I'm right because keeping the Poplar boys at arm's length by writing a check for a few guineas _____ not enough to satisfy your conscience since they are just as important—to England—as Brookfield is."

- A) are C) be
B) were D) is

☐ A ☐ B ☐ C ☐ D

- 120)** In an inclusive society, where normal people and people with disabilities live side by side, the blind _____ that the emotions and themes of their dreams are known to be similar to that of people with sight.

- A) Believes C) To believe
B) Believed D) Believe

☐ A ☐ B ☐ C ☐ D

121) Many a movie on historical topics _____ recently but Only a few are as good as released last year.

- A) have been released C) have released
B) has released D) has been released

☐ A ☐ B ☐ C ☐ D

122) 1280 kilometres from Tamanrasset to Timbuktu _____ too far for Christopher to continue without any guide so, Balanguernon arranged one of his most educated pupils, a young Tuareg noble named Boubaker, to act as guide for the first few days of his journey.

- A) been C) Are
B) were D) was

☐ A ☐ B ☐ C ☐ D

123) Tied neatly in a large silken kerchief _____ a pair of gold pendants set with large, shining stones and wrapped in a hundred rupee note.

- A) was C) been
B) to be D) were

☐ A ☐ B ☐ C ☐ D

124) Honor and glory _____ not for the traitors and his peoples in the eyes of their countrymen, and is often shunned or despised.

- A) Who is a medal for the patriots is
B) Which is a medal for the patriots are
C) Which are a medal for the patriots is
D) Which is a medal for the patriots is

☐ A ☐ B ☐ C ☐ D

125) Mr. Ralston asked Mr. Chips to resign because his method of teaching was outdated and out of hundreds of students, _____ through the Lower Certificate.

- A) Few were getting C) Few was getting
B) Little were getting D) A few was getting

☐ A ☐ B ☐ C ☐ D

126) Directions: Pick the correct option.

- A) The bureau needs to be exceedingly careful to avoid further stigmatizing someone whom prosecutors are not prepared to charge.
B) The bureaux needs to be exceedingly careful to avoid further stigmatizing someone whom prosecutors are not prepared to charge.
C) The bureau need to be exceedingly careful to avoid further stigmatizing someone whom prosecutors are not prepared to charge.
D) The bureau needs to be exceedingly careful to avoid further stigmatizing someone whom prosecutors is not prepared to charge.

☐ A ☐ B ☐ C ☐ D

127) A) Never before Cordova was so prosperous, Andalusia so rich and the state so triumphant.
B) Never before was Cordova so prosperous, Andalusia so rich and the state so triumphant.
C) Never before was Cordova such prosperous, Andalusia so rich and the state so triumphant?
D) Never before had Cordova been so prosperous, Andalusia so the rich and the state so triumphant.

☐ A ☐ B ☐ C ☐ D

A) A number of my friends loves riding bicycles, but neither my brother nor my sister owns a

- 128) bicycle; consequently, at 4 o'clock, either my mother nor father is coming to pick me up in a car.
- B) A number of my friend love riding bicycles, but neither my brother nor my sister own a bicycle; consequently, at 4 o'clock, either my mother or father is coming to pick me up in a car.
- C) A number of my friends love riding bicycles, but neither my brother or my sister owns a bicycle; consequently, at 4 o'clock, either my mother or father are coming to pick me up in a car.
- D) A number of my friends love riding bicycles, but neither my brother nor my sister owns a bicycle; consequently, at 4 o'clock, either my mother or father is coming to pick me up in a car.

☐ A ☐ B ☐ C ☐ D

- 129) A) I remember when two-third of the class of Mr. Chips' Students was affected with German measles and Big Hall was turned into a hospital ward.
- B) I remember when two-thirds of the classes of Mr. Chips' Students was affected with German measles and Big Hall was turned into a hospital ward.
- C) I remember when two-thirds of the class of Mr. Chips' Students was affected with German measles and Big Hall was turned into a hospital ward.
- D) I remember when two-thirds of the class of Mr. Chips' Students were affected with German measles and Big Hall was turned to a hospital ward.

☐ A ☐ B ☐ C ☐ D

- 130) A) The Bile of a person endued with certain qualities is the only one of the cures which is suggested by the physician and without which the disease of the king cannot be cure.
- B) The Bile of a person endued with certain qualities is the only one of the cures which are suggested by the physician and without which the disease of the king cannot be cured.
- C) The Bile of a person endued with certain qualities are the only one of the cures which is suggested by the physician and without which the disease of the king cannot be cured.
- D) The Bile of a person endued with certain qualities is the only one of the cures which is suggested by the physician and without which the disease of the king cannot be cured.

☐ A ☐ B ☐ C ☐ D

- 131) A) In the world, the number of peoples is rapidly increasing rather as a gigantic snowball who not only gets bigger as it rolls but goes faster as well.
- B) In the world, the number of people is rapid increasing rather like a gigantic snowball which not only gets big as it rolls but as well goes faster.
- C) In the world, the number of people are rapidly increasing rather like a gigantic snowball which not only gets bigger as it rolls but goes fast as well.
- D) In the world, the number of people is rapidly increasing rather like a gigantic snowball which not only gets bigger as it rolls but goes faster as well.

☐ A ☐ B ☐ C ☐ D

- 132) A) The committee which were appointed for the purification of the language by substituting genuine Turkish words for those of Arabic and Persian origin realized that the elaborate modes of address and flowery phrases were out of place in the modern world.
- B) The committee which was appointed for the purification of the language by substituting genuine Turkish words for those of Arabic and Persian origin realized that the elaborate modes of address and flowery phrases were out of place in the modern world.
- C) The committee which was appointed for the purification of the language by substituting genuine Turkish words for those of Arabic and Persian origin realized that the elaborate modes of address and flowery phrases was out of place in the modern world.
- D) The committee who was appointed for the purification of the language by substituting genuine Turkish words for those of Arabic and Persian origin realizing that the elaborate modes of address and flowery phrases were out of place in the modern world.

☐ A ☐ B ☐ C ☐ D

- 133) A) The Governor of the Province and Chancellor of our university preside over convocations and meetings of the University Senate and also give approval for conferring an honorary degree.
- B) Governor of the Province and Chancellor of our university presides over convocations and meetings of the University Senate and also give approval for conferring an honorary degree.
- C) The Governor of the Province and Chancellor of our university presides over convocations and meetings of the University Senate and also gives approval for conferring an honorary degree.

D) The Governor of the Province and Chancellor of our university preside over convocations and meetings of the University Senate and also gives approval for conferring an honorary degree.

☐ A ☐ B ☐ C ☐ D

- 134) A) The majority of the lecturers believe that the student has not copied in the examination.
B) The majority of the lecturers believes that the student has not copied in the examination.
C) The majority of the lecturers believe as the student has not copied in the examination.
D) The majority of the lecturers believe that the student has not copy in the examination.

☐ A ☐ B ☐ C ☐ D

- 135) A) Because Anni knows vermin are destroying her garden, she is going to spray pesticides her crops.
B) Because Anni knew vermin are destroying her garden, she is going to spray pesticides her crops.
C) Because Anni knows vermin is destroying her garden, she is going to spray pesticides her crops.
D) Because Anni knows vermins are destroying her garden, she is going to spray pesticides her crops.

☐ A ☐ B ☐ C ☐ D

PREVIOUS

FINISH TEST

